

Improvements in or relating to the isomerisation of paraffin wax

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Abstract of GB713910

A process for the isomerization of paraffin wax comprises vaporizing a paraffin wax and contacting the vapours, mixed with at least one mol. of hydrogen per mol. of wax and in the absence of any liquid phase, with a supported platinum catalyst at a temperature between 300 DEG C. and 550 DEG C. The carrier for the catalyst is preferably activated alumina, free from alkaline substances, and the catalyst may contain 0.05 per cent. to 1.0 per cent. platinum. The vaporized wax is preferably mixed with hydrogen in mol. ratio of at least 1:5, and the conditions should be such as to prevent condensation to a liquid phase. The contact time may be between 0.5 and 25 seconds and should be insufficient to produce more than 25 per cent. conversion to cracked products. The temperature is preferably between 375 DEG C. and 490 DEG C. and the pressure may be between 3.5 and 210 atmospheres, preferably between 21 and 70 atmospheres. The product consists of normally liquid oil, uncovered wax, partially converted wax and cracked products. The last are removed by distillation, and the wax may be removed from the oil and recycled, to give a high quality lubricating oil.

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PATENT SPECIFICATION

713,910



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Complete Specification Published: Aug. 18, 1954.

Index at acceptance:—Class 91, C(1E: 2E: 3E).

COMPLETE SPECIFICATION

Improvements in or relating to the Isomerisation of Paraffin Wax

We, NAAMLooZE VENNOOTSCHAP DE BATAAFSCHE PETROLEUM MAATSCHAPPIJ, of 30, Carel van Bylandtlaan, The Hague, The Netherlands, a company organised under the laws of The Netherlands, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to a process for isomerising paraffin wax and, in particular, to the production of lubricating oil and isoparaffin wax thereby.

Paraffin wax is a normally solid, wax-like substance composed of high molecular weight hydrocarbons. It is usually obtained from the heavier fractions of petroleum such as are used for the production of lubricating oils and certain burning oils. In general, the presence of paraffin wax in such oils is undesirable and it is removed by so-called dewaxing methods during refining. Although paraffin wax is extensively used for many purposes, for example, in the production of waxed paper and water-proofed cartons, there is still a considerable amount of paraffin wax for which there is no ready market.

It is known that the melting points of the hydrocarbons present in paraffin wax are lowered upon conversion to isomers having a more branched structure. Thus, normal hexacosane, a typical wax constituent, is a waxy solid having a melting point of 56° C., whereas its isomer 6:6-dipentyl hexadecane is a normally liquid compound having a melting point of -40° C. Thus, by suitable isomerisation a substantial conversion of high molecular weight paraffin wax to a normally liquid product may be obtained.

The main difficulty to be overcome in

the isomerisation of paraffin wax is the excessive degradation or cracking to lower molecular weight products of little value which generally occurs. It is well known that the tendency for hydrocarbons to crack increases rapidly with increasing molecular weight and this applies whether the cracking occurs under the influence of heat or of a catalyst. Thus, whereas normal butane may be selectively converted to isobutane, the selective isomerisation of paraffins of higher molecular weight becomes increasingly difficult as the molecular weight is increased.

The present invention provides a process for isomerising paraffin wax to products of substantially the same molecular weight without appreciable degradation or cracking, whereby good yields of excellent lubricating oil and isoparaffin wax are obtained. This process comprises vaporising a paraffin wax and contacting the vapours, mixed with at least one mole of hydrogen per mole of said wax and in the absence of any liquid phase with a supported platinum catalyst at a temperature between 300° and 550° C.

The process of the invention may be used to isomerise any normally solid paraffin wax. The wax may be derived from mineral sources, such as petroleum oil, shale, oil from tar sands, gilsonite and ozokerite, from coal by extraction and/or hydrogenation, or may be formed by the Fischer-Tropsch synthesis or as a by-product of other processes. The process of the invention may be used to isomerise crude so-called slack wax or refined waxes of various melting points. While the various crude waxes and refined waxes differ somewhat in properties, e.g. melting point and hardness, they are all composed of hydrocarbons containing

long paraffinic chains. In some paraffin waxes the chains may be slightly branched and some may have naphthenic or aromatic groups attached. Olefinic groups are rarely present but even if present, they do not affect the operation of the process. The paraffin chains of all such wax molecules can be isomerised by the process of the invention to give a product having a more highly branched structure.

The platinum catalyst employed in the process of the invention is supported on any of the conventional carrier materials hitherto employed as supports for platinum catalysts. Alumina is a preferred support material, activated alumina (gamma alumina) and activated bauxite being particularly suitable. The alumina should be substantially free from alkaline substances and particularly from compounds of the alkali and alkaline earth metals. In order to ensure the absence of any appreciable amounts of such materials in the catalyst, it may be necessary to treat the carrier material with acid, e.g. hydrogen chloride or hydrogen fluoride, prior to incorporating the platinum. The amount of platinum in the catalyst may vary from a few hundredths of a per cent, e.g. 0.05%, to about 1%, and is preferably between about 0.1% and about 0.6%.

The platinum may be applied to the support in any one of the several known ways. One suitable method is to impregnate the support material with a solution of a platinum salt, followed by drying and reducing in the conventional manner. Thus pellets of activated alumina may be soaked in a solution of chloroplatinic acid, dried, and reduced in hydrogen at 475° C.

An essential feature of the process of the invention is that the isomerisation is carried out in the presence of a large amount of hydrogen. The mole ratio of hydrogen to hydrocarbon should be at least 1 and preferably above 5 and may be much higher. However, in practice, the ratio will rarely exceed about 300.

In carrying out the process, the wax is vaporised in a suitable vaporiser, mixed with the hydrogen and the mixture is passed into contact with the catalyst. The hydrogen may advantageously be passed through the vaporiser to aid in the vaporisation. The contact is most conveniently effected by supporting a bed of the catalyst in a reaction tube and passing the vapour mixture through the bed. Other methods of contact may, however, be employed if desired. The vapours issuing from the reaction tube are cooled to condense the product and any gas present

is then separated from the condensate and recycled. By repeated recycling of this gas, the hydrogen becomes increasingly diluted with inert gases produced by the minor amount of side reactions occurring in the process. This is not particularly harmful as long as the specified minimum amount of hydrogen is present. In order to prevent the hydrogen from becoming excessively diluted with inert gases, a small amount of the effluent gas may be continuously withdrawn and fresh hydrogen added to the recycle gas.

The temperature in the catalyst bed in the process of the invention is preferably between 375° C. and 490° C. The operation may be carried out under reduced pressure, at atmospheric pressure, or at elevated pressures. Pressures between 3.5 and 210 atmospheres are suitable, pressures of the order of 21 to 70 atmospheres being generally preferred.

The conditions under which the process of the invention is carried out are such as to retain all the reaction mixture in the vapour phase and avoid any condensation to the liquid phase. It is essential that no condensation to a liquid takes place in the reaction zone.

A contact time of the vapour mixture with the catalyst of only a tenth of a second is in general sufficient to afford a practical conversion. It is evident that with such rates a small reactor is capable of handling a large throughput. Longer contact times may, however, be used, particularly when operating at the lower temperatures. However, the contact time at any given temperature should not be so long as to cause excessive cracking. The contact time may be adjusted between 0.5 and 25 seconds in any case to afford the desired conversion while limiting the formation of cracked products to below 25% and preferably to below about 20%.

When a paraffin wax is isomerised according to the process of the invention under the conditions described above, the product consists of normally liquid oil, unconverted wax, partially converted wax (isoparaffin wax), and a small amount of cracked products. The small amount of cracked material present in the reaction product may be distilled from the oil and wax. Depending upon the nature of the initial paraffin wax and the degree of conversion, the total reaction product or the reaction product from which the cracked products have been removed by distillation may vary in consistency from a slurry or mush to a grease-like or plastic material. This product may be used without any further processing, but for some purposes, particularly where a

crude wax feed was used, it may be desirable to refine the product by such methods as extraction, clay treating or chemical treatment.

5 It will generally be desirable to separate the reaction product into two or more fractions. Thus, by employing conventional dewaxing techniques, a very high quality lubricating oil fraction may be separated. The pour point of the oil will depend in part upon the dewaxing conditions used and in turn the yield will depend in part upon the pour point chosen. Excellent yields of very low pour point oil of adequate viscosity for commercial usage and having a high viscosity index have been obtained from the product of a single pass isomerisation treatment. In view of its very low pour point and very high viscosity index, the oil is particularly suited for many special purposes such, for example, as refrigerator lubricating oil, low temperature hydraulic fluid and in the production of low temperature greases.

The wax residue obtained after separating the oil consists of unconverted and partially converted wax and the mixture has a lower melting point and softer consistency than the starting material. It may be used as such or recycled in the isomerisation process to produce additional amounts of oil.

35 This waxy residue may also be separated by known techniques into a fraction of partially converted or isoparaffin wax and a fraction of unconverted wax. Either of these fractions may be recycled. Isoparaffin wax produced by the partial isomerisation of a wax consisting essentially of normal paraffins partakes somewhat of the characteristics of microcrystalline wax and may be used in place of microcrystalline wax. The isoparaffin wax differs from ordinary paraffin wax in having a much less brittle and more rubbery or plastic consistency. It resembles carnauba wax in its ability to absorb considerable quantities of oil without becoming sticky or tacky.

The amounts of oil, isoparaffin wax and

unconverted paraffin wax present in the reaction product depends somewhat upon the character of the wax feed and largely upon the severity of the treating conditions, i.e. on the degree of conversion attained. When the process of the invention is operated under relatively mild conditions, only a small amount of oil is formed; under more severe conditions the amount of oil is greatly increased, usually with more cracking.

The following examples illustrate the invention.

EXAMPLE I.

A paraffin wax having the following properties was isomerised by the process of the invention:—

Melting point, 59/60° C.
Average Molecular Weight 385

d_4^{20}	0.78
n_D at 60° C.	1.4356
n_D at 70° C.	1.4325
n_D at 80° C.	1.4293

The isomerisation was effected by vaporising the wax with from 52 to 63 moles of hydrogen per mole of wax and passing the vapour mixture through a bed of platinum-alumina catalyst containing 0.3% platinum under the following reaction conditions:—

Temperature	430° C.
Pressure	35 atmospheres
Space Velocity*	25.4

* Space velocity is the volume of wax processed per volume of catalyst per hour.

The losses, including the small amount of cracked products, amounted to about 2.4% of the wax feed. The product was refined by a series of dewaxing steps to separate narrow fractions of the oil present. The amounts and properties of the oil fractions are shown in the following table:

Fraction	Yield (Wt. % of wax feed)	Viscosity cs.		Viscosity Index	Pour Point °C. (ASTM)	n_D at 70° C.
		37.7°C.	99°C.			
A	5.6	12.02	3.16	144	-26	1.4332
B	1.6	12.50	3.00	105	-15	1.4474
C	2.2	11.34	3.15	160	-4	1.4325
D	5.6	11.79	3.29	169	+15.5	1.4322
	Total 15.0					

Since the conditions were in this case very mild due to the very high space velocity, (calculated contact time, 0.77 seconds) the degree of conversion obtained was relatively small. It will be noted, however, that 15% by weight of the wax was converted to oil of which about 37% was an oil (fraction A) having a viscosity suitable for low temperature applications, a viscosity index above 100, and a pour point of below -20°C . This desirable oil could be separated and the remaining oil recycled with or without the unconverted and partially converted

wax. Operation under such conditions is attractive because the throughput is high and the losses to cracking are low.

EXAMPLE II.

A further sample of the paraffin wax employed in Example I was isomerised under conditions similar to those in Example I except that the space velocity was 6.8. The losses, including losses to cracked products, amounted to about 5.6% by weight. The product was refined as in Example I to give the following oil fractions:

Fraction	Yield (Wt. % of wax feed)	Viscosity cs.		Viscosity Index	Pour Point $^{\circ}\text{C}$. (ASTM)	n_D at 70°C .
		37.7°C .	99°C .			
A	25.4	11.62	3.03	134	-48	1.4330
B	5.3	8.03	2.28	105	-29	1.4460
C	10.7	11.30	3.12	164	-15	1.4317
D	13.7	11.75	3.27	163	+18	1.4315
Total	55.1					

It will be seen that by employing somewhat more severe isomerisation conditions, the yield of oil was increased to 55% by weight and that more than half of the oil was lubricating oil of especially desirable properties. The unconverted and partially converted wax, amounting to 39% of the feed, could be recycled.

EXAMPLE III.

A further sample of the paraffin wax

employed in Example I was isomerised under conditions similar to those in Example I but with a space velocity of 2.3. Under these more severe conditions the losses, including the loss through cracked products, amounted to about 18% by weight. The product was refined as in Example I to give the following yields of oil.

Fraction	Yield (Wt. % of wax feed)	Viscosity cs.		Viscosity Index	Pour Point $^{\circ}\text{C}$. (ASTM)	n_D at 70°C .
		37.7°C .	99°C .			
A	6.6	6.55	1.95	89	-57	1.4551
B	37.8	11.01	2.89	127	-51	1.4326
C	10.7	11.01	3.04	152	-12	1.4312
D	9.8	11.10	3.14	164	+7	1.4310

It will be seen that the yield of valuable lubricating oil was again greatly increased with a relatively small increase in cracked products.

The above examples illustrate on a readily comparable basis the effect of the severity of the conditions upon the yields obtained. The severity of the conditions may also be altered by changing other factors than the space velocity, e.g., the temperature and/or pressure.

EXAMPLE IV.

A white, hard, heavy distillate wax having the following inspection data was isomerised:

Melting Point, A.S.T.M.— 87°C .
 Gravity A.P.I., 99°C . 51.8
 n_D at 80°C . 1.4376
 Oil content, A.S.T.M. D—721 0.87%
 Molecular Weight 522
 Viscosity, SSU at 99°C . 50.6

The wax was vaporised and isomerised under the following conditions:

Temperature, °C.	404—440
Pressure	17.5 atmospheres
Space Velocity	5.12
Mole ratio of hydrogen to wax	33

There were obtained 74.5% by weight of a wax of soft consistency containing lubricating oil; 12.4% by weight of a distillate fraction boiling between 150° C. and 265° C. at 6.9 mm. pressure and containing light lubricating oil; 9.4% by weight of cracked products boiling up to 150° C. at 6.9 mm. pressure and 3.7% by weight of gas plus experimental loss.

EXAMPLE V.

Bright stock wax is the very high molecular weight wax obtained by dewaxing bright stock, which is the residue remaining after distilling off the lubricating oil fractions from a lubricating oil petroleum stock. A bright stock wax having the following inspection data was isomerised:—

Density, g/ml. at 20° C	0.8899
Viscosity at 99° C A.S.T.M.	
D—445	20.50
Molecular weight	717

The wax was vaporised with hydrogen and isomerised under the following conditions:—

Temperature, °C	418—421
Pressure, p.s.i.g.	300
Space Velocity	1.66
Mole ratio of hydrogen to wax	330

There were obtained 71.9% of a very soft wax containing bright stock; 20.8% of a distillate fraction boiling up to 238° C. at 3 mm. pressure and containing lubricating oil; and 7.3% of gas plus unaccounted losses. The soft wax was found to have a lower coefficient of friction than the starting wax and in view of its softer consistency was a better lubricant for metal rolling.

What we claim is:—

1. A process for the isomerisation of paraffin wax, which comprises vaporising a paraffin wax and contacting the vapours, mixed with at least one mole of hydrogen per mole of said wax and in the absence of any liquid phase, with a supported platinum catalyst at a temperature

between 300° C. and 550° C

2. A process as claimed in claim 1 wherein the vaporised wax is mixed with at least 5 moles of hydrogen per mole of wax.

3. A process as claimed in claims 1 or 2 wherein the carrier for the platinum catalyst is alumina free from alkaline substances.

4. A process as claimed in any one of the preceding claims wherein the temperature is between 375° C. and 490° C.

5. A process as claimed in any one of the preceding claims wherein the pressure is between 3.5 and 210 atmospheres.

6. A process as claimed in claim 5 wherein the pressure is between 21 and 70 atmospheres.

7. A process as claimed in any one of the preceding claims wherein the contact time of the mixture of vaporised wax and hydrogen with the catalyst is between 0.5 and 25 seconds and is insufficient to produce more than 25% conversion to cracked products.

8. A process as claimed in any of the preceding claims wherein the hydrogen is used mixed with inert gases.

9. A process as claimed in any one of the preceding claims wherein the reaction product is distilled to remove normally liquid byproducts formed by cracking.

10. A process as claimed in claim 9 wherein the residue remaining after removing the byproducts is dewaxed to separate a lubricating oil of low pour point and high viscosity index from a waxy residue.

11. A process as claimed in claim 10 wherein the waxy residue is separated into isoparaffin wax and unconverted paraffin wax.

12. A process for preparing a lubricating oil of low pour point and high viscosity index and isoparaffin wax by isomerising paraffin wax substantially as hereinbefore described with reference to the Examples.

13. Lubricating oil of low pour point and high viscosity index and isoparaffin wax prepared by isomerising paraffin wax by a process claimed in any one of the preceding claims.

14. Lubricating oil as claimed in claim 13 having a pour point below -20° C. and a viscosity index above 100.

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INVENTORY REPORT

Submitted: 5 PM 5/21/2007

Merchandise Status

Note: Bold type indicates a status change since the last Merchandise Status Inventory report. Effective with orders submitted Tuesday, May 22, 2007

DELAYED ITEMS

- 75634 Becker Folding Chair (exp 6/25)
- 75635 Becker Folding Table (exp 6/25)

JUST ARRIVED

- 12496 St Lawrence Shelf
- 12953 Regency Sconce
- 13142 Tanner Storage Shelf
- 13737 Homegrown Fruit Prints
- 14057 Love & Peace Dove Figurines
- 14153 English Ivy Textured Pillar Candle 3x4
- 15433 Apple Pie a la Mode Layered Petite Jar Candle
- 15434 Strawberry Shake Petite Jar Candle
- 15616 Americana Layered Petite Jar Candle
- 15517 Wild Sunflowers Hurricane Jar Candle
- 15587 Tropical Paradise Layered Ginger Jar Candle
- 36180 Home Field Sports Ball Plaques
- 70147 Carlisle Grouping Special
- 75756 Gardeners Hand Therapy- Tarragon and Mint

SMALL QUANTITY

- 11927 Alana Bathroom Hardware Set
- 12378 Mustang Bookends
- 12866 Avignon Plaques/Sconces
- 12869 Brighton Box Lamp
- 13361 Bryson Wall Organizer
- 13972 Heartstrings Photo Frame—Roma Downey Collection™
- 36163 So-Handy Hamper- Blue
- 36278 Julz Chalkboard
- 40109 Faux Fruit Medley
- 75047 Rosetta Pitcher
- 75610 Copper-Lined Planter
- 75760 Gardeners Hand Scrub- Cilantro
- 75807 Chelsea Accent Table
- 75811 Rattan Storage Stool
- 76468 Francisco Orbs
- 76805 Mirror Leaf Sconce
- 99542 English US/PR Order Form
- 99899 Sheet of 4 \$10 Gift Certificate

TEMPORARILY OUT

*See Consultant Connection for more details

- 12468 Flouris Mirror (exp 6/18)
- 12719 Cherub Candle Holder (exp 5/24)
- 13205 Vintage Shelf/Towel Rack (exp 6/4)
- 13207 Vintage Bathroom Hardware Set (exp 6/4)
- 15002 50th Anniversary Celebration—Denim Days® (exp 6/18)
- 16370 Celine Mirror (exp 6/11)
- 36135 Classic Peg Mirror- Brick Red (exp 6/5)
- 36181 Home Field 3-Tier Shelf (exp 7/7)
- 36188 Terry the Turtle Accent Pillow(exp 6/12)

- 36223 Polka Dot Peg System (exp 5/31)
- 36262 Julz Wall Hooks (exp 5/31)
- 36271 Flower Patch Shelf (exp 6/16)
- 36275 Flower Patch Bolster Pillow (exp 7/2)
- 36277 Flower Patch Bedding (exp 6/13)
- 36281 Girls Grow Plaque (exp 5/28)
- 40113 Wildflower Bush (exp 5/28)
- 70143 Celine Grouping Special (exp 6/11, expected arrival date based on expected date of #16370 Celine Mirror)
- 75059 Divided Glass Dish (exp 7/2)
- 75070 Audrey Serving Pedestals (exp 6/25)
- 75604 Eclectic Cross Windchime (exp 5/23)
- 75630 Delaney Hanging Basket Stand (exp 6/18)
- 75632 Parker Garden Cart (exp 6/18, working to improve delivery date)*
- 75757 Gardeners Hand Scrub- Tarragon and Mint (exp 5/24)
- 75805 Tapestry Planter Boxes (exp 5/25)
- 75808 Rattan Basket Stand (exp 6/13)
- 76458 Benton Basket Tree (exp 6/27)
- 76806 Spiral Votive Holder Sconce (exp 5/31)
- 99009 Candle Sampler Bag (exp 7/9)
- 99221 Candle Sampler 1 (exp 7/9)
- 99222 Candle Sampler 2 (exp 7/9)
- 99223 Candle Sampler 3 (exp 7/9)
- 99224 Candle Sampler 4 (exp 7/9)
- 99225 Candle Sampler 5 (exp 7/9)
- 99226 Candle Sampler 6 (exp 7/9)
- 99082 Candle Sampler Kit (exp 7/9)

DISCONTINUED MERCHANDISE

- 11132 Fruit Trio Accent Plates
- 11816 "The Greatest Teacher" Print-Matthew 5:1
- 12341 Cranberry Mandarin Tea Light Candles
- 12350 Jellybeans Scented Easter Egg Candle
- 12734 Chalkboard Organization Station
- 12747 St. Germain Wall Clock
- 12853 Gratitude Plaque—Roma Downey Collection™
- 12928 Hanging Capello Sconce
- 13713 A Mother's Love Print
- 13769 Floral Noir Prints
- 14050 "Jesus, The Good Shepherd" Figurine
- 36177 Hang Ten Print
- 36146 GOAL! Accent Pillow, SOLD OUT
- 36232 Flower Power Plaques
- 40516 Curly Willow
- 47048 Exotic Potted Orchid
- 76406 The Everything Vase- Small
- 76412 Chinese Seasons Plates
- 79011 Poppy Stems
- 92117 Easter Bunny Bobblers

DISCONTINUED—10% DISCOUNT (Discounted Wholesale Price Listed)

- 11870 Candlestick- The Rooster Collection, \$9.41
- 12208 Milano Votive Cup- Amber Lustre, \$5.45
- 12275 Tuscan Sunflower Candle Lamp, \$8.41
- 12486 Hailey Shelf, \$19.80
- 12569 Pressed Tin Mirrors, \$29.70
- 12665 "Marissa" Figurine- The Ebony Collection, \$19.80
- 12742 Ovella Magnetic Chalkboard, \$14.85
- 12789 Farmhouse Chair, \$7.43
- 12926 Cathedral Arch Sconce, \$19.80
- 12951 Rustic Rooster Sconces, \$14.85
- 13993 Logan Handwoven Basket, \$3.96
- 40094 Peach Peony Bundle, \$13.37
- 40548 Gerbera Daisy Bouquet- Bright, \$7.43
- 47033 Indian Summer Bush, \$11.39
- 75051 Vineyard Estate Serving Bowl, \$17.33
- 75053 Vineyard Estate Serving Platter, \$14.85
- 75066 Vineyard Estate Appetizer Plates, \$19.80
- 75067 Vineyard Estate Salt and Pepper Shakers, \$6.44
- 75612 Metal Hanging Basket, \$17.33
- 76013 Flowerpot Chandelier, \$34.65
- 87171 Rustic Charm Cabinet, \$128.70

DISCONTINUED—20% DISCOUNT (Discounted Wholesale Price Listed)

- 11780 Trenton Decorative Box with Clock, \$13.20
- 11926 Calypso Capello, \$22.00
- 12631 Taste of Italy Candle Capper®, \$5.72
- 12641 Aubrey Candle Capper® Shade, \$6.60
- 13770 Foliage Noir Print, \$57.20
- 36152 Where's the Fire? Accent Pillow, \$8.80
- 36174 Xtreme Surfer Signs, \$11.00
- 40086 Mini-Apple Topiary, \$16.28
- 40553 Veggie Swag, \$9.68
- 46079 African Lily Bush, \$7.48
- 47044 Pink Romance Wreath, \$15.40
- 75069 Crema Bowl, SOLD OUT
- 75814 Aspen Accent Tables, \$61.60
- 76450 Dakota Baskets, \$26.40
- 76452 Bosque Wood Tray, \$17.60
- 81425 Berry-licious Homestyle Jar Candle, SOLD OUT
- 81602 Sugared Pineapple Textured Candle Jar, \$5.28
- 81605 Lnen Fresh Textured Candle Jar, SOLD OUT
- 81609 Mango Cooler Textured Candle Jar, \$5.28

81621 Seaside Breeze Textured Candle Jar, \$5.28

DISCONTINUED—30% DISCOUNT
(Discounted Wholesale Price Listed)

12379 Sabrina Lampshade Nightlight, \$5.78
12396 Engraved Garden Stones- Roma Downey Collection™, \$7.70
12639 Madeline Tea Light Holder, \$6.55
12720 "Father, I Pray..." Plaque, \$6.55
12851 Blessing Plaque-- Roma Downey Collection™, \$9.63
12899 Sea Grass Planter, \$9.63
14055 "La Pieta" Figurine -John 19:26- Greatest Stories Ever Told, \$9.63
14704 "Duma Duma" Cheetah Sculpture—Boehm at Home® Collection, \$50.05
36147 Stop Right There! Accent Pillow, \$7.70
36148 Star's and Checks Rug, \$14.25
36173 Board Shorts Accent Pillow, \$9.63
36175 Big Kahuna Bedding, \$38.50
36176 Hang Ten Wallies, \$7.70
36178 Longboard CD Tower, \$15.40
36242 Flower Power Rug, \$14.25
40095 Nasturtium Bush, \$6.55
46077 Eucalyptus Bush, \$6.55
76441 Textured Bud Vases, \$9.63
76461 Estate Um, \$19.25
80000 Garden Harmony Candle Capper® Shade, \$5.78
80401 Candle Plate and Necklace, \$5.78
81424 Carrot Cake Homestyle Jar Candle, \$2.70
81428 Sugar & Spice Homestyle Jar Candle, \$2.70
81431 Pumpkin Cookies Homestyle Jar Candle, \$2.70
81619 Bayberry Pine Textured Candle Jar, \$4.62
81620 White Cranberry Swirl Textured Candle Jar, \$4.62
92201 Cuadro "Las Madres son Angeles de Dios"—Roma Downey Collection™, \$7.00

DISCONTINUED—50% DISCOUNT
(Discounted Wholesale Price Listed)

12462 Malaya Mirror, \$13.75
14703 "Crimson Spring—Cardinals on White Dogwood" Sculpture—Boehm at Home® Collection, SOLD OUT
76453 Green with Envy Urns, \$10.18
76901 Sun Table Linens, \$9.63
78005 Double Scallop Shelf, \$12.38
80001 Modern Striped Candle Capper® Shade, \$4.13

DISCONTINUED—70% DISCOUNT
(Discounted Wholesale Price Listed)

11465 French Café Tray, \$6.11
13127 St. Nicholas Circle Print—Library Edition by Thomas Kinkade™—Designer Series, \$33.00
47060 Bashful Berry Wreath, \$4.95
76709 Glass Wall Pockets, \$4.95
80203 Hearts and Stars Candle Capper® Venting Plates, \$1.65

DISCONTINUED – PRICE POINTS
(Discounted Wholesale Price Listed)

IMPORTANT REMINDERS:

Art & Accessory Guides:

99175 Summer – English
99176 Summer – Canadian

Quarterly Catalogs:

99768 Summer – English
99769 Summer – Spanish
99770 Summer – Canadian

Monthly Catalogs:

99634 April – English
99753 April – Spanish
99704 April – Canadian

99635 May – English
99754 May – Spanish
99705 May – Canadian

99636 June – English
99755 June – Spanish
99706 June – Canadian

Leaflets:

99150 Summer Home Fragrance Collection - English

99310 May Red Rose Event Leaflet- English
99311 May Red Rose Event Leaflet- Spanish
99312 May Red Rose Event Leaflet- Canadian

99780 Spring Fundraiser – English
99781 Spring Fundraiser – Spanish
99782 Spring Fundraiser – Canadian

99783 Fall Fundraiser – English
99784 Fall Fundraiser – Spanish
99785 Fall Fundraiser – Canadian

Flyers:

99282 Summer Petite Candle – English
99286 Summer Petite Candle – Canadian
99326 Homestyle Candle Jar - English

FrameIt Tools:

99254 Frame It Replacement Cards

Party Invitations:

99170 Summer HI - English

Hostess Program Merchandise Update:

<u>Item#</u>	<u>Description</u>	<u>Availability</u>
12328	Vintner's Storage Table, Espresso	Good Supply
12329	Vintner's Storage Table, Black	Good Supply
12330	Akia Storage Stool	Good Supply
12358	Ciara Storage Baskets	Good Supply
18100	Artisan Pottery Print – Designer Series, DS	SOLD OUT
18101	Cobblestone Brooke Print – Designer Series, DS	SOLD OUT
18102	Vibrant Blooms Print – Designer Series, DS	SOLD OUT
18103	Magnolia Duet Prints	SOLD OUT
18104	Serenity's Glow Print – Designer Series, DS	SOLD OUT
18105	Tuscan Sunflower Print – Designer Series, DS	SOLD OUT
18106	Portrait of Grace Print – Designer Series, DS	SOLD OUT

18107	King of the Creek Print – Designer Series, DS	SOLD OUT
18108	Budding Beauties Photographs	SOLD OUT
18109	Pitchers of Hope Prints	SOLD OUT
18110	Floral Tapestry Print – Designer Series, DS	SOLD OUT
18111	Sacred Grove Print – Designer Series, DS	SOLD OUT
18112	Irises in St Remy Print	SOLD OUT
18114	Water Lilies at Giverny Print	SOLD OUT
18115	Children Playing at the Seashore Print	SOLD OUT
18116	Among the Sierra Nevada Mountains Print	SOLD OUT
18117	Spring Still Life Print	SOLD OUT
18119	Hook, Line & Sinkers	SOLD OUT
18121	Everett's Cottage Print—Library Ed by Thomas Kinkade™	SOLD OUT
18122	Joy & Praise Print	SOLD OUT
18123	Spring Home/Summer Home Prints	Good Supply
40118	Potted Agave Plant	SOLD OUT
40119	Potted Sword Fern Plant	SOLD OUT
40120	Potted Areca Palm Plant	SOLD OUT
40121	Potted Spath Plant	SOLD OUT
75300	Sonoma Villa® Covered Cake Plate	SOLD OUT
75301	Sutter Indoor/Outdoor Chandelier	SOLD OUT

HEX Candle in a Jar Update:

Item#	Description	Availability
11693	Fresh Peach Scented Candle in a Jar	Good Supply
11943	Baked Apple Pie® Scented Candle in a Jar	Good Supply
11945	Strawberries & Cream Scented Candle in a Jar	Good Supply
11967	Very Berry Scented Candle in a Jar	Good Supply
11968	Vanilla Crème Scented Candle in a Jar	Good Supply
11998	Raspberry Lemonade Scented Candle in a Jar	Good Supply
11999	Caribbean Splash Scented Candle in a Jar	Good Supply
12337	Hot Cinnamon Bun Scented Candle in a Jar	Good Supply
12528	Mango Cooler Scented Candle in a Jar	Good Supply
12531	Rain Forest Scented Candle in a Jar	Good Supply
12534	Caramel Pear Scented Candle in a Jar	Good Supply